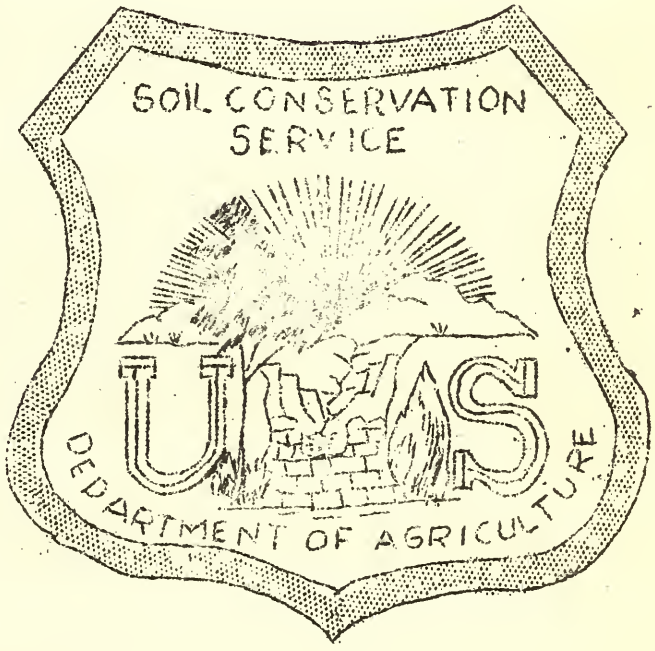
[V. 2, no. 3]

BANISTER RIVER BANNER

BANISTER RIVER AREA
SANDY RIVER AREA
APPOMATTOX — CAMPBELL AREA

PROJECT 22 DANVILLE, VIRGINIA



OCTOBER
1935

OCTOBER BANISTER RIVER BANNER

Published monthly at Chatham, Virginia, by the Soil Conservation Service, as a means to bring to public notice, practical information concerning the conservation of soil and water.

P. F. Keil, Regional Director

and

Staff members of the Virginia Soil Conservation Service

VOLUME 2 October 1935 NUMBER 3

A MESSAGE FROM THE REGIONAL DIRECTOR

PROGRESS

The Soil Conservation Service of the United States Department of Agriculture here in Virginia is happy to state that considerable progress has been made during the past twelve months with a definite coordinated erosion control program. Much of this progress is due to the cooperation and support of the Virginia Experiment Station, The Virginia Extension Service, County Agricultural Agents, Department of Agriculture, Teachers of Vocational Agriculture and other interested agencies.

Effective October 1, 1935 a branch office was opened in the Lynch Building, Ninth and Main Streets, Lynchburg, Virginia.

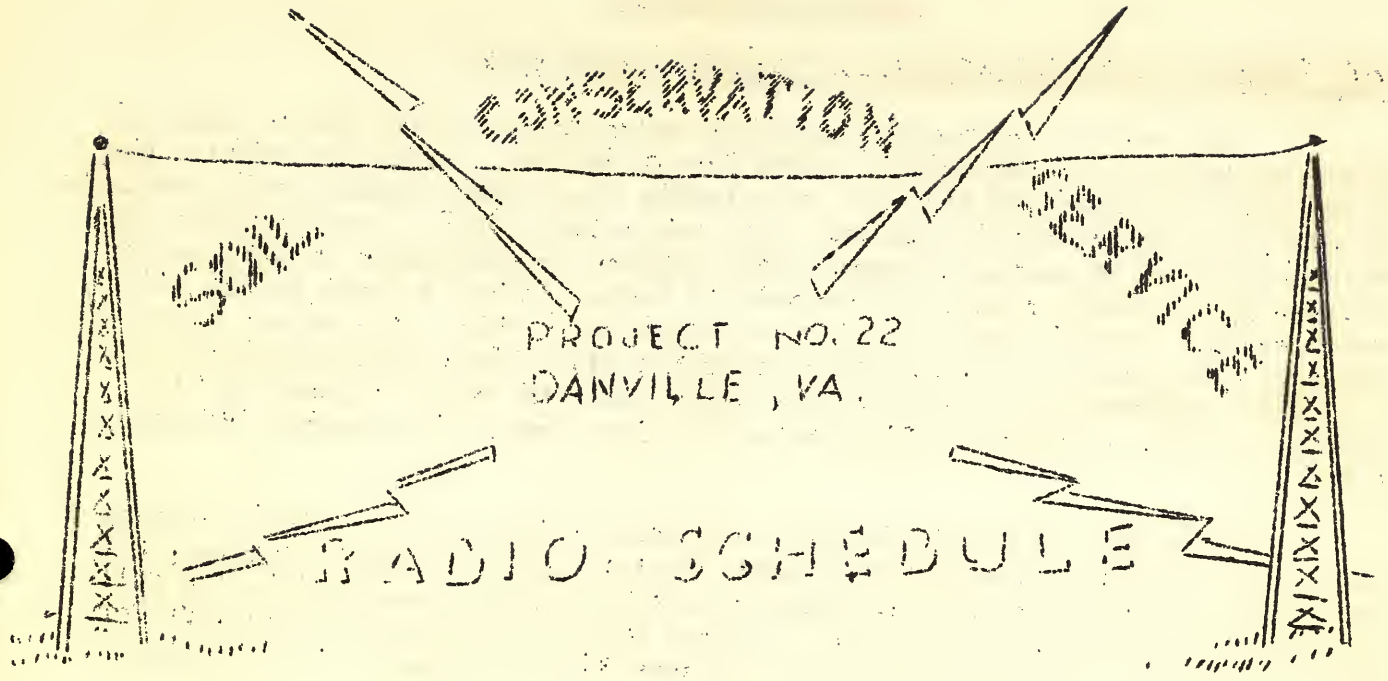
At the present time we have three demonstration areas; viz., Banister River Watershed in Pittsylvania County, Sandy River Watershed in Henry-Pittsylvania Counties and the Campbell-Appomattox Area. In addition to three erosion control demonstration areas, thirteen CCC camps are assigned to the Soil Conservation Service in the State of Virginia.

The landowners in many of the camp areas have, with the aid of the Extension Service, formed Voluntary Soil Conservation Associations. Committees have been appointed to handle various phases of a coordinated soil erosion control program.

Quoting from the report of the Secretary's Committee "The development of erosion-control methods, investigation bearing directly upon such methods, and the operation and maintenance of demonstration and other erosion-control projects are the major responsibilities of the Soil Conservation Service. But erosion control, to be effective, permanent, and economically feasible, involves more than the use of vegetative and engineering methods. It involves also general land-use planning, proper crop rotations, controlled livestock grazing, and the application of other sound farm-management practices."

With the above thought in mind, we, of Soil Conservation Service are planning for even greater progress during the next twelve months.

P. F. Keil, Regional Director.



STATION W.B.T.M., DANVILLE, VA., FARM BULLETIN HOUR 1:00 P. M.

October 1, 1935 - "Saving Lespedeza Seed", by T. L. Copley, Chief Agronomist;

October 8, 1935 - "Sedimentation, The Final Damage of Erosion", by C. L. King, Technical Foreman, ECW;

October 15, 1935 - "Contour Furrows", by E. R. Minnich, Agricultural Aide (Engineering);

October 22, 1935 - "When The Waste Must Stop", by Wm. E. Dickerson, Jr., Agricultural Aide (Engineering);

October 29, 1935 - "Wild Life Conservation", by W. L. Byers, Assistant Technician, ECW.

STATION W.R.V.A., RICHMOND, VIRGINIA, - 2:30 to 2:45 P. M.

October 10, 1935 - "The Farm Management Phase of Soil Conservation", by C. E. Koontz, Technical Foreman, ECW;

October 17, 1935 - "The Future Benefits of the Soil Conservation Program", by A. D. Williamson, Technical Foreman, ECW;

October 24, 1935 - "Soil Erosion, a Public Enemy", by E. W. Mundie, Camp Superintendent, ECW;

October 31, 1935 - "Some Economical Phases of Soil Conservation", by John A. Smart, Associate Soil Conservationist.

AGRONOMY DEPARTMENT

LET'S PREVENT THE WINTER LEACHING OF VALUABLE PLANT FOOD

The practice of keeping a winter cover crop of small grain, grass or winter legumes on our cultivated fields does more than prevent the washing away of the soil. It prevents the loss of valuable plant food elements made available by decaying organic matter. We are told that a large part of the nitrogen and potash contained in summer legumes, like cowpeas, or lespedeza, if left on idle land during the winter, will be leached out before it can be used by the next summer crop. However, this loss can be prevented if there is a winter cover crop growing on this land to take up this liberated plant food. This being the case, it is very important that we seed some small grain or winter legumes on all fields possible, whether the crop is to be turned under or harvested for hay or grain.

Lespedeza is being used more and more in the rotation and is usually turned under during the winter for corn. Better results might be secured, for the reason just mentioned, if rye were seeded on the lespedeza sod in the fall and fallowed just before the corn. In cases where a lespedeza sod is left for several years, it is always better to add some kind of grass to take up these plant food elements that would otherwise be lost.

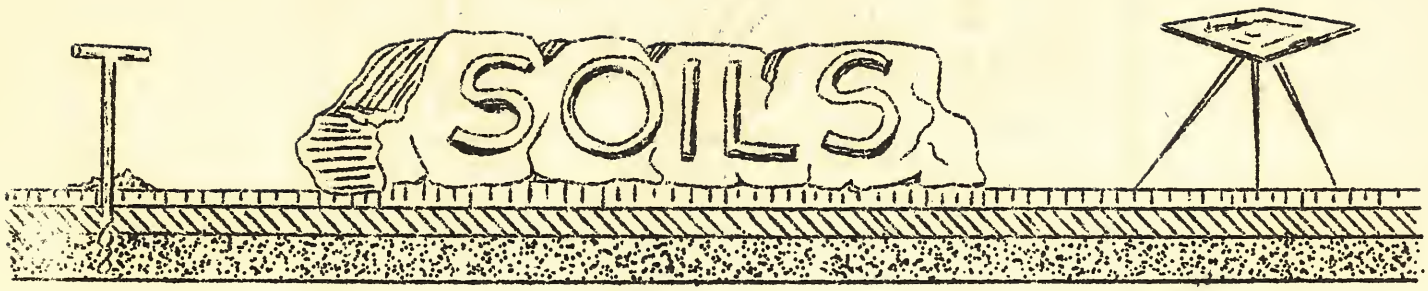
RAINFALL IN BANISTER RIVER AREA DURING SEPTEMBER

Transient Camp - - - - -	4.41 inches	Forney's Shop - - - - - - -	5.54 inches
Shockoe - - - - - - - - -	5.70 "	Walker's Store - - - - - - -	4.12 "
Jones' Mill - - - - - - -	5.60 "	Bryant's Store - - - - - - -	5.05 "

During the month of September more rainfall was recorded from the 4th to 8th than at any other time during the year. The total rainfall for these days ranged from 3.85 inches to 5.1 inches, in various sections of the Banister River Area. The highest amount of rainfall during any one day was at Jones' Mill on September 4th, where a 3 inch precipitation was recorded. At Forney's Shop and Shockoe, 2 inches or more was recorded during a single day. It might be interesting to note that a 3 inch rainfall means approximately 81,456 gallons or 346 tons of water per acre.

Only about 40% of this water is absorbed by the soil, leaving the remaining 60% to run off and take away with it valuable soil and plant food. This situation can be changed considerably on fields that have been terraced. The surplus water can be conducted from the field so gradually that practically all the soil particles will be left on the field.

Terraces can not perform this most important duty unless they are properly cared for. During the winter months, when our fields are not adequately covered with growing plants, the terraces have a greater responsibility and therefore, should be looked after more carefully. A few hours spent with a plow or "V" drag, cleaning out your terraces will prevent overflowing and the loss of both soil and plant food.



Up to October 15, 1935 the Soils Department has made detailed erosion surveys of 1,266 farms of 94,965 acres of the Banister River Area and 130 farms of 20,000 acres of the Sandy River Area.

To continue with the description of soils found in these areas, a general description of the Granville Series is presented.

GRANVILLE SANDY LOAM (62)(G)*

GRANVILLE FINE SANDY LOAM (63)(GS)

Where not eroded, the surface soil of the Granville Sandy or Fine Sandy Loam is a light grayish-yellow to gray, friable deep sandy to fine sandy loam 10 to 18 inches deep. The subsoil consists of a yellow friable sandy clay loam, fine sandy clay loam or sandy clay of from 30 to 42 inches in depth.

DERIVED FROM: - "Triassic Sandstone",

DISTRIBUTION: - Occurs throughout the "Triassic" sandstone division, closely associated with the Wadesboro, White Store, Penn and Lehigh series.

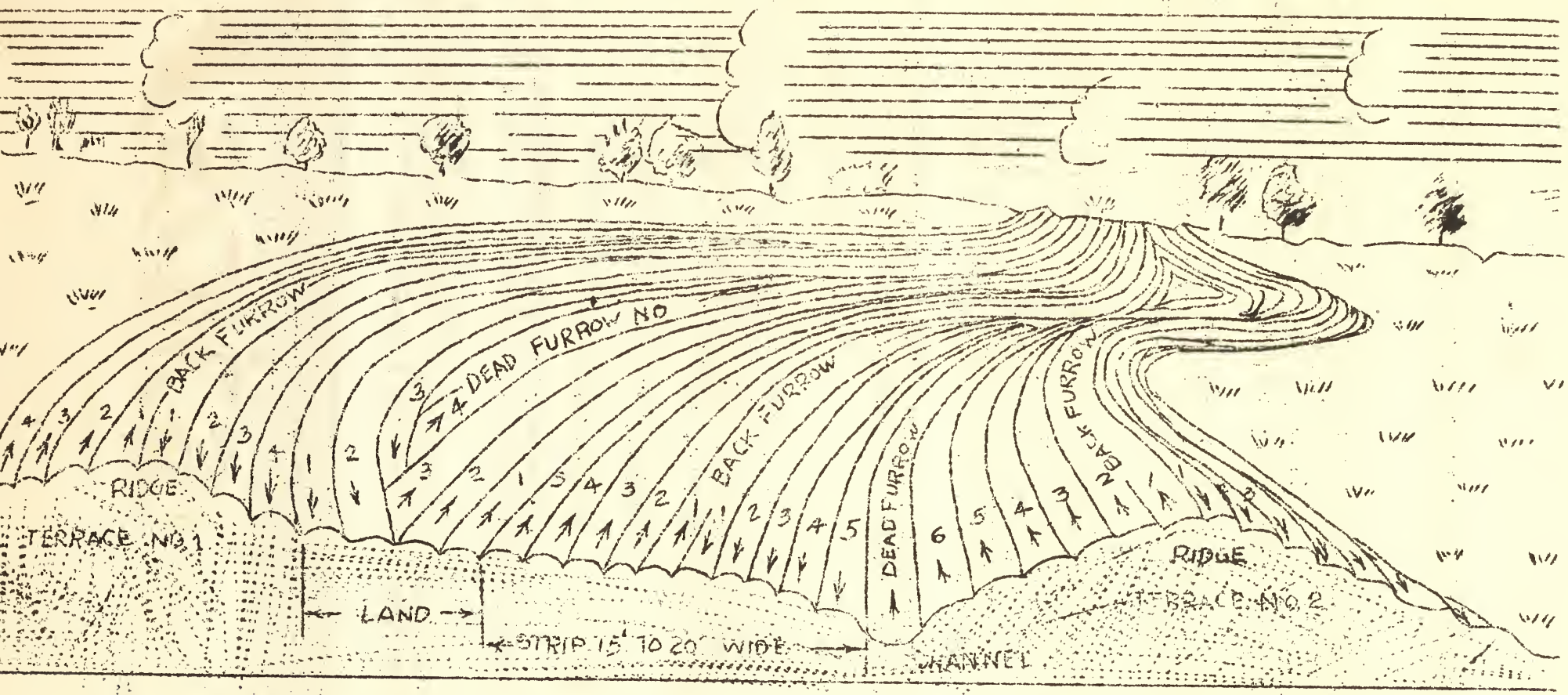
FERTILITY: - The soils of the Granville series are extremely deficient in plant nutrients. Their loose and porous structure permits loss of soluble plant foods very readily in percolating ground waters. The use of a high grade complete fertilizer is usually recommended for the soils of this series. Tobacco and truck crops require special fertilizers. A liberal application of lime will usually produce a noticeable response in crop production.

DEGREE OF EROSIVENESS: - The soils of this series have unusually deep, sandy and porous surface and subsoils, which allows downward penetration of water and are thereby classed as among the least erosive of the soils in the area.

CROP ADAPTABILITY: - The Granville Sandy loam is highly prized for tobacco and truck crops, while corn, sorghum and forage crops produce fair yields. The Granville fine sandy loam, although being slightly heavier in texture, is better suited for small grains and grasses, although used considerably for tobacco and truck crops.

* Number or letters in parenthesis designate field mapping symbols.

ENGINEERING



METHOD OF MAINTAINING TERRACES BY PLOWING

ARROWS INDICATE THE DIRECTION IN WHICH FURROWS ARE MADE

ENGINEERING DEPARTMENT

At this season of the year considerable land preparation is usually done, and it seems appropriate to call your attention to the cut on the opposite page, to further familiarize you with the proper method of plowing terraced fields. Remember that by plowing terraces properly you can eliminate considerable maintenance work that necessitates separate or extra operations.

The first step in plowing the field is to begin on the ridge of terrace No. 1, and back furrow or bed up the entire terrace ridge as shown by the arrows, until the upper furrow is in the center of water channel. After this operation do the same with terrace No. 2. These two operations complete, start a back furrow as indicated by the number 3, not less than fifteen (15) feet to the water channel of terrace No. 2, and parallel to it. Bed this land until you have plowed to the channel of terrace No. 2 leaving a dead or finishing furrow in the channel.

Now that these operations are complete, a land is left just below terrace No. 1, that is, to be plowed out leaving a dead or finishing furrow. The location of this dead furrow may be changed each year by locating (Back furrow or operation No. 3) further up from the water channel of terrace No. 2. Or in other words, bed up a wider bed in operation No. 3. However, do not decrease the distance below 15 feet as in back furrowing, a ridge will be left too close to the channel making it more difficult to get machinery over.

The hillside plow, if available, can be used very effectively for plowing terraced fields in that, the entire area between terraces can be plowed and turned up hill. Thus eliminating the dead or finishing furrow and the back furrow as shown in Operation 3 and 4.

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SOIL CONSERVATION ASSOCIATIONS' TOUR

On Thursday, October 31, 1935, the Chatham Project was visited and inspected by a delegation of officers and members of the Soil Conservation County Associations from Bedford, Botetourt, Campbell, Dinwiddie, Franklin, Henry, Nottoway, Pittsylvania and Rockbridge Counties.

The inspection tour was conducted by members of the demonstration staff, assisted by Mr. J. A. Waller, Jr., of the V. P. I. Extension Service. Special emphasis was placed on the correct method of plowing fields containing terraces and several such fields were visited during the afternoon.

Approximately 75 guests were present, and we feel that a profitable day was spent in inspecting the field work of our Chatham Project, as well as the agronomic work at the experiment sub-station nearby.

We wish to again extend a most cordial invitation to any and all interested parties to inspect the Chatham Project.

SAVING LESPEDEZA

Several weeks ago cards, concerning the saving of lespedeza and use of lespedeza seed pans, were mailed to the cooperators in the Banister River and Sandy River Areas. If you have not returned the card mailed you and you have lespedeza tall enough to mow and save seed from, send your card in to the Chatham or Danville office at once, requesting one of our seed pans.

The seed pan method of saving lespedeza seed is a comparatively new method, although very simple. The pan which measures about 4½ feet in length is fastened to the back side of the cutter bar in such a manner as to save most of the seed cut by the mower. The plants when cut fall on top of the pan and by the use of a rake or some other farm implement are shattered and allowed to go through the small holes into the pan. The pan can be adjusted to fit most any cutter bar and will work very efficiently on land that is neither too cloddy nor rocky.

The amount of seed that can be saved with the pan is largely dependent on the conditions of the land, state of maturity of the lespedeza, height of the plants, and stand. In order to receive the best results with the seed pan, and save as many seed as possible, the seed should be well matured. Maturity is hastened by several good killing frosts, thus giving the plants a dark brown color and making the seed more easily obtained. A member of the Soil Conservation Service will visit the farms of those who expect to save seed, deliver a seed pan and assist in operating same.

Under favorable conditions a few acres of lespedeza will supply enough seed for the rotations on the average farm in the Demonstration Areas. However, an abundance of seed can be saved from the smaller plots. Let us urge that you take advantage of this economical way of saving your lespedeza seed and in return save a part of the expense of buying seed for your rotation, which is a part of your cooperative agreement.

* * * * * *

THE MAJESTY OF TREES

There is a serene and settled majesty in woodland scenery that enters into the soul, and delights and elevates it, and fills it with noble inclinations. As the leaves of trees are said to absorb all noxious qualities of the air and to breathe forth a purer atmosphere, so it seems to me as if they drew from us all sordid and angry passions, and breathed forth peace and philanthropy.

There is something nobly simple and pure in a taste for cultivation of forest trees. It argues, I think, a sweet and generous nature to have this strong relish for the beauties of vegetation, and this friendship for the hardy and glorious sons of the forest. There is a grandeur of thought connected with this part of rural economy. It is, if I may be allowed the figure, the heroic line of husbandry. It is worthy of liberal, and free-born, and aspiring men. He who plants an oak, looks forward to future ages, and plants for posterity. Nothing can be less selfish than this.

- - - - - - Washington Irving.

THE USE AND IMPORTANCE OF MEADOW STRIPS

What is a meadow strip? How does it function? How is it located? What is the function of the ditches around the strip? Should the strip be kept clipped? Is it permanent? And numerous similar questions have been asked the SCS since the preparation of the first meadow strip in July 1935. Since that time approximately 25 strips have been prepared and seeded in the Banister River Area.

A meadow strip, as used in this area, will serve as an outlet for the terraces on the surrounding fields that will drain into it. A meadow strip is located in a natural swale or depression which serves as a drain for the fields surrounding it. The width of the strip will vary depending upon the natural width of the depression, some strips are 100 feet wide. The width must be sufficient for the edges to be one to two feet higher than the center so that there is no danger of the water going over the side and causing a gully. The wider the strip, in reason, the better the chance of success, because it gives a greater area over which the water may spread and thus reduce it's cutting power to a minimum. The length of the strip must be sufficient to care for the water until it reaches a point where other methods of control will operate. Some strips are nearly one-half mile long. The area of these strips range from 1/8 acre to nearly five acres.

Many factors determine the location of meadow strips, as, slope, drainage area that the strip must care for, presence of deep gullies, presence of sufficient soil to produce a good sod, natural width of depression and other similar points. Generally, meadow strips with a drainage area of 15 to 30 acres should not be placed on slopes over 6% and preferably on slopes ranging from 3 to 5%. The presence of deep gullies eliminate the use of a meadow strip. A narrow depression ten or fifteen feet wide that can not be widened is not suitable. All factors determining the location of a meadow strip are so closely linked and dependent upon all concerned that a definite rule for the location of the strip can not be given at this time.

In nearly every case, the use of some machine grading is necessary. The meadow strip is graded with a slight slope to the center of the strip so that the water will be carried from the mouth of the terrace and cause it to spread instead of running near the edge of the strip. Depressions and high points in the strip are filled and cut to prevent a concentration of water. The strip must be graded so that the water will spread. After grading of the strip is completed, ditches are cut around the strip to keep the water from surrounding fields off the strip until a good sod is established. After securing a good sod, the side ditches are filled and the terraces are allowed to empty on the strip.

Every effort is made to secure and maintain a good sod on the strip. A good seed bed is prepared, limed, fertilized and seeded with a mixture of grasses, clovers and lespedeza, and red spots in the strip are mulched. Hard rains shortly after seeding often cause small washes in the strip which the farmer will have to mend by using sod or a little soil and reseeding. A complete sod is essential. The farmer must fertilize and lime the strip in the future as it is permanent. Keeping the strip clipped is essential, and by clipping, the farmer is afforded a goodly amount of quality hay. Thus a properly cared for meadow strip will be very profitable to the farmer in many ways.

The principles involved in the construction of meadow strips, as described above, can be used on practically every farm. Small draws or gullies in a field may be prepared, seeded and mulched and allowed to remain in grass.

CCC LABOR AND HOW IT CAN BE USED

In order that the Cooperators and prospective Cooperators of the Soil Conservation Service, as well as the general public, may have a better understanding of the various classes of work that can be done by Emergency Conservation Work labor (CCC) in checking and controlling soil erosion on private lands in the State, the following outline of permissible work is submitted.

(a) THE CONSTRUCTION OF TERRACE OUTLET STRUCTURES AND WATERWAYS for the protection of terrace systems that are constructed in cultivated fields and pastures by the landowners, or County Associations in Soil Conservation Service Association Areas, or by the Soil Conservation Service on Federal demonstration projects. CCC labor can be used in the construction of all necessary outlet structures and waterways only when the terraces are built according to Government specifications.

(b) REFORESTATION. Planting of trees on land too steep for cultivation and on badly eroded areas.

(c) GULLY CONTROL WORK. This work consists of the construction of necessary soil check dams and diversion ditches; sloping and grading gully banks; seeding and planting grasses, vines, trees or shrubs in the gully bottoms and on the banks for permanent vegetative control.

(d) FOREST THINNING OR FOREST STAND IMPROVEMENT WORK. This work is permitted only on Federal demonstration projects. However, a small amount of this work will be done in Association Areas for demonstrational purposes.

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A NEW PUBLICATION "SOIL CONSERVATION"

In August 1935, appeared the first edition of "Soil Conservation", the new and official publication of the United States Department of Agriculture, Soil Conservation Service.

This magazine is to be issued monthly, and each issue will contain general and useful information of public interest of all the Soil Conservation Service Projects in the United States.

A small yearly publishing charge has been made, and interested parties may obtain this bulletin at 10 cents per copy; or by subscription at the rate of $1.00 per year, payable in advance to the Superintendent of Documents, Government Printing Office, Washington, D. C. Subscription payment should be made in form of money order or draft, as postage stamps cannot be accepted.

* * * * * * * *

A true forest is not merely a storehouse full of wood but, as it were, a factory of wood, and at the same time a reservoir of water. When you help to preserve our forests or to plant new ones you are acting the part of good citizens.

- - - - - - Theodore Roosevelt.

CAMPBELL-APPOMATTOX DEMONSTRATION AREA

FARM MANAGEMENT

Work in the Campbell-Appomattox Area was begun September 16th, at which time the first Cooperative Agreement was signed. Since that time 25 farmers have signed Cooperative Agreements, covering a total of 4,373 acres.

The interest shown by the farmers has been very encouraging and the accomplishments thus far have been beyond expectation. There are some farms in the area which serve as a means of visual education since a good system of rotation has been practiced with the more steep land being kept in permanent pasture and forest. With the farmers open for suggestions and the importance of a good rotation appreciated by them, erosion should be greatly reduced in this area, with such aid as the Soil Conservation Service will be able to render.

AGRONOMY

The Agronomy Department wishes to express to the farmers of this area its appreciation for the cooperative spirit with which they have entered into the soil erosion control work on their farms. The project was begun too late in the season for many fall seeding demonstrations to be started, however, several agreements have been signed and plans lined up so that we will be able to take advantage of the early spring seeding season.

The farmers in this area and the county agents are to be congratulated for the very effective way in which they have reduced erosion on the farms. This has been accomplished chiefly through the good rotations and pasture plans which have been practiced throughout most of the area. You have done a good job of saving your soil through your own efforts and now it is our plan to do everything we can to help you make a good job better. We would like to impress on you that your problems are our problems and that our reason for being here is to help you to help yourself. With the cooperation you are now showing we will make a good job of it, but without your cooperation we can accomplish little.

The Agronomy Department will have charge of the issuance of the seed, lime, and fertilizer allotted to you by the contact men, and we will notify you as soon as possible when and where to come for these materials. We will be glad also to assist you in interpreting your farm plans and in getting the seed sown in the right fields. Let's all work together and make a good job better.

ENGINEERING

Since the starting of this project two weeks ago, the Engineering Department has devoted its efforts in planning work for 150 relief men. We are glad to say that the accomplishments of these men have been real good. They have sloped and seeded over 30,000 sq. yds. of banks, built 25 soil saving dams in gullies, and cut 2,000 ft. of diversion channel.

FORESTRY

A large percentage of the farmers of the Appomattox Area who are cooperating with the Soil Conservation Service, are requesting the planting of from three to five acres to black locust. These locust plots are to be used for the production of fence post. There is a scarcity of good fence post on the area and the farmers have to buy them from other sections, so they are taking advantage of a good opportunity to have a locust plot established on their farms, and save the cash outlay which they have been spending for post.

NATIONAL SOIL EROSION FACTS

DID YOU KNOW - An average crop of vetch turned under green will supply the soil with 20 pounds of badly needed nitrogen per acre. This nitrogen will be effective on the crops which follow for more than two years. The organic residue will be effective for many years. It would cost ten dollars per acre to supply this nitrogen and humus in the form of commercial fertilizers.

STOP THIEF - Erosion has completely destroyed for American Agriculture more than 35,000,000 acres of land formerly in cultivation and the topsoil is almost all gone from 125,000,000 acres still in cultivation. All crops grown in the United States annually remove about six billion pounds of plant food from the soil. Erosion annually removes about 21 times this amount.

--"Sooner State Erosion News", Stillwater, Okla.

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"When our soils are gone, we too must go, unless we shall find some way to feed on raw rock or its equivalent."

--T. C. Chamberlin, Bethany, Missouri.

* * * * * * * * *

"Blessed is he who terraceth his land and ploweth crooked rows, yet mindeth it not, the same shall prosper and his neighbors shall call him wise."

--From 'Dad' Shorts Ten Commandments of Terracing, Bethany, Missouri.

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"Subsoil farming and bankrupt farmers go hand in hand. Protect your capitol."

--"The Northwester", Pullman, Washington.

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"When things go 'up the creek' they come back down but topsoil headed down the creek is going, going, gone."

--"The South Tyger River News", Spartanburg,S.C.

* * * * * * * * *

IT TOOK MILLIONS OF YEARS to build up our virgin topsoils; but it will take only several generations to wash and blow it away.

FORESIGHT IN CONSERVING the topsoils will enhance the prosperity of the nation.

WHEN THE TOPSOILS are washed away from upland farms, sands and impervious clays remain to be washed down onto the low lands. This material often covers bottom soils and destroys the productive capacity of bottom farms.

THE MOST IMPORTANT PROBLEM of the United States is to maintain the fertility of its soil. The rule is that old land is less productive than new land.

THE TOPSOILS OF THE HILLY LANDS are being eroded away by sheet erosion. When the topsoils are gone, the capacity to hold and absorb moisture is decreased, and the fertility is reduced.

FARMING FEWER ACRES and obtaining better yields is more desirable than farming more acres and obtaining less yields.

--"Soil Erosion Topics", Algion, Nebraska.

FORESTRY DEPARTMENT

Selective Cutting

Selective cutting removes the least amount of trees per acre at any one time than any other system of cutting. Selective cutting is more readily adapted to forest that have the trees of all ages spaced regularly over the area so that one tree can be taken here and there and yet not cause too great a break in the ground covering.

Selective cutting is the removal from a stand of the large mature trees and the smaller defective ones, and the reservation for future growth and for seed production of at least the soundest and most vigorous of the younger trees. The woodland owner who plans to handle his holding under this method may with profit cut a few of the largest trees from each acre of his woodland each year, or at intervals of ten years or less.

In checking over your woodlands, keep in mind the following points:

1. Take only mature and defective trees. Learn your trees, you can tell a mature tree by its outward appearance.

2. Care should be exercised in felling the trees so as to do the least amount of damage to reproduction and immature trees.

3. Always keep in mind the trees for the future; strive to secure reproduction as soon as possible for each tree removed.

4. Brush disposal is a requirement in all good forest plans; burn your brush on dry, south and west slopes, chop up and scatter the brush on moist slopes. Fire is one of the trees greatest enemies.

5. A mature tree, like mature grain, should be harvested; your greatest returns come from mature crops.

6. A tree attains height growth first, then diameter growth.

7. A tree in an over crowded stand means slow growth for each tree.

8. A tree in open stands grows to limbs, and limbs produce knots in lumber.

9. By harvesting your trees during the winter the routine of farm work is not broken, there is less danger of fire, and the work of destructive insects and diseases is at a minimum.

10. Study your local market possibilities and grow the product best suited to your locality.

11. A desirable tree requires no more space in which to grow than an undesirable one.

Remember that the selection cutting method is the best way to keep the forest lands productive in this area, and that the practice of this method by a Soil Conservation Service Cooperator will assure him of a perpetual wood supply, both for himself and his descendants.

UNITED STATES
DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

DANVILLE, VIRGINIA

OFFICIAL BUSINESS

PENALTY FOR PRIVATE USE TO AVOID
PAYMENT OF POSTAGE, $300